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THE USE OF RADIO IN 4-H CLUB WORK

by

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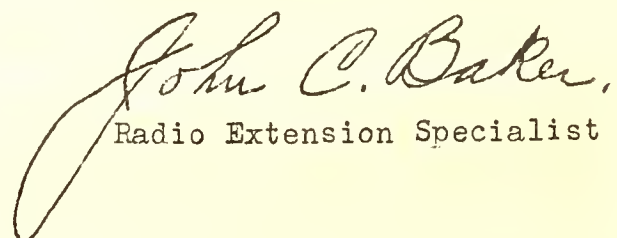
\*Two national 4-H Club fellowships, providing for 9 months' study in the United States Department of Agriculture, are awarded each year by the National Committee on Boys and Girls Club Work, Chicago, Ill.

## FOREWORD

Ever since radio broadcasting became a reality, and radio listening became a habit with a large proportion of the people of the United States, many extension workers have been using radio as an extension tool. They have used it to teach subject matter, to report to taxpayers on the services being rendered, to arouse interest in farm and home problems, to make the extension service known to a larger number of people who might use its services, and to make other extension methods more effective. Their techniques have varied with individual preferences; many of them have been borrowed from the classroom or the group meeting; some of them have been acquired by suggestion from professional broadcasters. Until 1939, nobody had taken time to make a study of what the rural radio audience wanted to hear from extension workers or how it wanted it presented.

Miss Lillian Murphy, home demonstration agent of Vigo County, Ind., was awarded one of the two fellowships offered by the National Committee on Boys and Girls Club Work for study in the Department of Agriculture for the scholastic year 1939-40. Her experience with a daily broadcast originating in the county extension office in Vigo County led her to develop for her thesis a study of radio in 4-H Club work. This report, summarized by Miss Murphy from her thesis which was accepted by The George Washington University as partial fulfillment of requirements for a Master's degree, omits many of the details of the sound research procedure which she used in her studies. But it does set forth convincing data on the listening preferences of rural young people of 4-H Club age, and on the relative effectiveness of three different methods of presenting subject-matter broadcasts.

The results support methods which successful broadcasters have long advocated. But there are many other "rules of thumb" in radio technique as used by extension workers which need equally thorough investigation. It is to be hoped that Miss Murphy's splendid study will point the way not only to more effective broadcasting technique but also to more fact finding on the use of radio as a method of doing extension work.

  
Radio Extension Specialist

## THE USE OF RADIO IN 4-H CLUB WORK

### INTRODUCTION

A microphone stands on the desk of the Vigo County Agricultural Agent, in Terre Haute, Ind. Each weekday from 11:30 to 11:35 a.m., the agricultural agent, his assistant, or the home demonstration agent presents "Timely Agricultural Topics."

From July 1, 1938, to October 1, 1939, while serving as home demonstration agent in Vigo County, the writer put on these 5-minute radio programs from two to four times weekly, centering them on 4-H Club work or on general home-economics helps. Sometimes the programs were interviews with homemakers or 4-H Club girls; sometimes they were talks based on timely subject matter; sometimes it was easier to read part of a newly issued bulletin. Which was most effective? There was no sure way of knowing.

According to annual reports submitted by county and State extension workers, every State has some type of 4-H Club radio program. The 1938 summary of these reports shows that 24,066 radio talks were prepared or given by county extension workers.

A great many people can be reached by 24,066 radio talks; but were they reached? Are extension agents qualified to use radio to advantage? Should every extension agent make an effort to obtain and use radio time? Do radio programs help maintain the interest of 4-H Club members? These and other questions have occurred to the writer and probably are typical of the questions other extension workers have asked themselves.

This report is the result of studies made in an attempt to answer some of the foregoing questions, to learn the reaction of 4-H Club members to 4-H radio programs, and to test the effectiveness of three different styles of radio presentation.

### REACTION OF CLUB MEMBERS TO 4-H RADIO PROGRAMS

In order to learn the reaction of 4-H Club members to 4-H radio broadcasts, questionnaires were mailed to selected counties in Maine, New York, Arizona, Massachusetts, Illinois, and Georgia. In each of these counties, 4-H Club members had an opportunity to hear regular 4-H broadcasts on three levels -- local, State, and

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national. The extension agents had 283 club members answer the questionnaires at club meetings.

Ninety-two percent of the club members reported that they had radio sets in their homes. (National average for rural homes was estimated at approximately 70 percent in 1940.) The times when most club members usually listen to the radio are any evening, any time Saturday, and any time Sunday.

Table 1 indicates the percentage of the club members studied who listen to 4-H broadcasts.

Table 1.--Percentage of 4-H members who listen to various types of 4-H broadcasts

Scope of the broadcast	Percentage who listen				Percentage not reporting
	Regularly	Frequently	Occasionally	Never	
Local (county)...	13.1	20.5	34.6	21.9	9.9
State-wide.....	5.7	12.4	26.1	35.0	20.8
National.....	6.0	10.9	26.5	44.9	11.7

The question "Whom do you like to hear on 4-H radio programs?" was answered by 205 of the club members. They were asked to check two in the list of nine given in table 2.

Table 2.--Type of speaker that 4-H Club members like to hear on 4-H radio broadcasts

Type of speaker	Members preferring type of speaker	
	Number	Percentage
4-H Club members.....	141	68.8
County extension agents.....	65	31.7
Local leaders of 4-H Clubs.....	56	27.3
Farmers and homemakers.....	48	23.4
Specialists at State colleges.....	24	11.7
State 4-H leaders.....	22	10.7
Former 4-H members.....	19	9.3
National 4-H leaders.....	18	8.8
Boosters of 4-H Club.....	17	8.3

The reason for listening given most frequently was "To learn what other 4-H members do." The most frequent reasons given for not listening to the programs were "Didn't know about the broadcast," "Not near a radio," and "Forgot to listen."

Help with 4-H project work is the greatest gain the club members had received from the 4-H radio programs they had heard.

To improve 4-H broadcasts, club members say: Give us more music, more information to help us with our project work, and more experiences of other club members.

#### RELATIVE EFFECTIVENESS OF THREE TYPES OF RADIO PROGRAMS

The three types of short radio programs most frequently used in Vigo County, Ind., as well as in other counties and States, are: (1) The bulletin style, (2) the informal talk, and (3) the interview.

To test the relative effectiveness of these three types, arrangements were made with radio station WBOW in Terre Haute to broadcast three programs. These 5-minute broadcasts were directed to girls of 4-H Club age in the rural schools. Each broadcast presented educational material which the girls might enjoy and from which they might:

1. Gain knowledge about the subject matter presented.
2. Acquire an appreciation for this knowledge.
3. Use the knowledge in their homes.

"How to Press Woolen Garments" was the subject covered in each broadcast. The topic selected had to be one that would interest every girl, and yet the broadcast had to offer new information. Special emphasis was put on the technique of removing "bagginess" from the backs of the wool skirts and removing "shine" that comes on wool skirts and dresses after a hard season's wear. The information was given in March, a time when school clothes needed to be rejuvenated in order that they might last until the end of the school year.

Vermont Extension Brieflet Number 480, "The Art of Pressing" by Edna Sommerfeld, extension clothing specialist, was used as the source of information. The facts given in this bulletin are not often included in high-school curricula; they are more apt to be found in a college clothing course.

For the bulletin-style broadcast, Brieflet No. 480 was read verbatim.

For the second broadcast, an informal talk, the material from Brieflet No. 480 was rewritten in an effort to make it more conversational. About one-half of the facts were omitted so that human-interest stories illustrating the main points in good pressing methods might be included.

The third broadcast was an interview with Velma Hailman, a 16-year-old Virginia club member. Before the radio script was prepared, Velma was asked to read the bulletin on pressing and to press some of her wool skirts following the directions given. After Velma had mastered the pressing technique, she assisted in writing the script.

Excerpts of these radio scripts illustrate the differences in the three types.



EXCERPTS FROM BULLETIN STYLE BROADCAST

The topic for today is "The Art of Pressing."

Pressing requires the use of proper equipment and the knowledge of the technique or methods necessary in handling different fabrics.

Wool garments need to be pressed often because the wool fiber absorbs moisture from humid air as well as from direct contact with a liquid. It tends to hold the liquid so acquired and the lines of the fabric made from wool fibers change as the separate fibers comprising it become moisture laden. If the fabric is allowed to go without pressing its surface will be rough and uneven and the fit of the garment will be changed. Pressing then becomes necessary to restore the wool garment to its original lines and establish anew the sharp edges of pleats, hems, and other details.

For pressing woolen garments the following equipment will be found essential in every home: Iron, ironing board, pressing paddle, tailor's pad, press cloths, sponge or soft cloth, bowl or pan of water, and a brush.

Pressing is not ironing. It is the combination of heat, the right amount of steam, and some pressure that turns the garment from a poorly-pressed into a well-pressed garment.

Wool and silk, because of their elastic nature, require more care in pressing than do cottons or linens.

Before pressing wool, the Bureau of Home Economics recommends that a piece of wool material be placed over the ironing board cover. The garment to be pressed is then placed on the board, right side to the board. The heavy press cloth made of heavy muslin or firm linen crash is wrung out of water so that it is quite damp but not dripping wet. It is placed over the woolen. If it is desired to make the hot iron slide more easily in pressing, cover the damp cloth with the dry lightweight press cloth. Using a moderately hot iron, press by raising the iron and setting it down slowly until the press cloth is almost but not quite dry. When the press cloth is lifted, there should be a slight amount of steam rising from the garment. If the wool is pressed too long, a shiny appearance will be the result. "Finish-up" the pockets, pleats, hems, seams, etc., by paddling or stroking them with the pressing paddle after the press cloth is removed.

EXCERPTS FROM INFORMAL TALK BROADCAST

Have you ever been told that you are judged by the clothes you are wearing? It doesn't seem quite fair -- but it is true to a certain extent.

I remember one day in college our professor had each one of us take our turn standing in front of the class and being criticized by the rest of the girls. You know, it was funny -- but not one girl was criticized for not being well dressed. The clothes were all "good looking", but 90 percent of the criticism was that our clothes needed pressing.

How would you rate today if this happened to you?

Probably you wouldn't score as high as last September when your wool skirt was new. But if you don't have any more money to spend on new clothes than I have, you are wearing the same skirt you were last fall. And I know you can do it and still look nice if you take time to press it about once a week. You notice I said press, not iron. Pressing is quite different from ironing. In fact, ironing is apt to ruin your wool skirt. It will flatten the wool and make it hard and shiny. You want it to look soft and hold its shape.

Maybe you've never noticed it -- but on new wool material you have a "nap." I mean the short fuzz on the right side. It may be so short that you can't see it without a magnifying glass -- but it's there.

Then as you wear this new skirt -- or dress -- or coat -- (it's all the same) you smash down the nap and stretch the material out of shape.

Now to raise the nap and get the material back in shape -- this is where pressing comes in.

Yes, that's right, pressing raises the nap. It may sound funny but try it and see for yourself.

Put a piece of wool material on top of the ironing board -- just any old piece will do, but be sure it's clean. The principle is that when you press wool material on another piece of wool this short fuzz I told you about will stand up again, but it won't stand up as well if you use an ordinary ironing board cover. That's why I say use soft wool.

EXCERPTS FROM INTERVIEW BROADCAST

Lillian

Murphy--This morning I'd like to introduce a 4-H Club girl from Fairfax, Virginia -- her name is Velma Hailman.

Velma

Hailman--Good morning, girls. Miss Murphy has told me some nice things about you.

Lillian---Yes, that's right, and I've learned many fine things about you, Velma. Didn't your mother tell me you've been a 4-H'er seven years now?

Velma-----Yes, she may have, but it doesn't seem that long. Gee, I must be getting old --

Lillian---Oh, my yes, I'll bet you're almost 16.

Velma-----No fooling, I am. I was 16 in December -- and just see how tight my clothes are getting.

Lillian---Oh, now, this dress is just right. You know, you remind me of Charlotte Halstead. She's a 4-H girl in Terre Haute -- but I guess she's a little taller than you. She always is so neat and has a smile for everyone. In fact you two girls even wear the same style dress. Did you make this one?

Velma-----Yes, ma'am, I made it last summer for a 4-H project.

Lillian---Why, it looks like new.

Velma-----Oh, Miss Murphy, don't say that. I've worn it all winter.

Lillian---Well, then, you certainly have taken good care of it.

Velma-----Well ... I do press it almost every week and clean it occasionally. You know ... I think keeping it pressed makes a big difference.

Lillian---It surely does. And it also makes a big difference how you press it. So many girls don't like to press --

Velma-----I didn't used to, but the way I do now, is easy.

Lillian---Suppose you tell the Indiana girls how a Virginia 4-H girl does it.

Velma-----Yes, ma'am. First I pin a strip of wool material on the ironing board cover to press the wool dress on -- it's better than using the ordinary ironing board cover.

Lillian---Uh-huh.

Velma-----Then I turn my dress wrong side out and press it, on the wrong side with a moderately hot iron.

Lillian---Press on the wool dress?

Velma-----Oh, no, -- I use a sugar sack for a pressing cloth. I have it quite wet when I lay it on the dress, then I press slowly by just raising and setting down the iron until the pressing cloth is almost dry.

Lillian---You don't take long strokes with the iron like in ironing a cotton dress?



Each of the broadcasts gave four rules to follow when pressing a wool skirt:

1. Use a piece of wool material over the ironing board cover.
2. Press the garment on the wrong side.
3. Use heavy muslin for a pressing cloth.
4. Press slowly by raising and setting down the iron.

Three essential differences characterize these programs: (1) The manner of giving the pressing rules, (2) the varying amount of emphasis given each rule, and (3) the build-up of listener interest before rules are given. In each broadcast, the girls were encouraged to send for the bulletin, "How to Press Woolens."

#### MEASUREMENT OF EFFECTIVENESS

The three radio scripts were made into 5-minute recordings in the Division of Motion Pictures, Extension Service, U. S. Department of Agriculture. These three records were mailed to radio station WBOW, Terre Haute, and played on the regular broadcast of "Timely Agricultural Topics."

Vocational home-economics teachers in six of the Vigo County rural schools took radios to school so their girls could hear the broadcasts. Two different schools listened to each broadcast. No girl heard more than the one assigned program. Not all girls were 4-H Club members, but all were between the ages of 10 and 20. When the girls heard the broadcast, they did not know that they would be asked to take a test on their knowledge of pressing.

A 2-week period was allowed between the radio program and the testing to give the girls ample time to send for the pressing bulletin and to do some pressing. Two weeks after the day the broadcast was heard each girl was given a 5-page test questionnaire to answer. The girls checked these sheets during school time under the supervision of the home-economics teacher.

The first part of the test consisted of 44 items testing their knowledge about pressing woolen garments. The second part asked the girls what they had done since hearing the broadcast. The third section asked their reaction to the radio program. Part four of the questionnaire given each girl was a general home-economics information test. This test, together with information relating to age and grade in school, was planned as possible criteria to use in equating the groups.



# RELATIVE INCREASE IN SUBJECT-MATTER KNOWLEDGE

Girls of the same age in two additional schools were also given the test questionnaire. They had not heard any of the broadcasts and are designated as the control group. The scores made by the four groups are presented in figure 1.


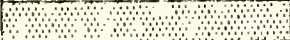
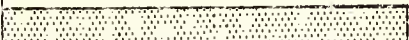
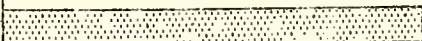
Group	Number of girls in group	Average score on pressing test						
		0	5	10	15	20	25	
Control group.....	50	10.66						
Group hearing:								
"Bulletin style" broadcast	124	14.74						
"Informal talk" broadcast.	67	21.12						
"Interview" broadcast.....	32	21.75						

Figure 1.--Pressing test score of 273 Indiana girls

As it is possible that the three groups may have had a different amount of knowledge of how to press woollens before hearing the broadcast various criteria for equating them were tested. The only data which showed a high relationship with the pressing test scores were the home-economics test scores (Pearsonian product-moment coefficient of correlation of  $+.69$ ). By setting up a regression equation based on these two sets of scores of the control group, equivalent control groups for each experimental group were established. The average gain in pressing-test score made by the group hearing each broadcast over the average score of an equivalent control group is presented in figure 2. The gains made have a high statistical significance.<sup>1/</sup>

Stating the results of this study very simply, one can say that the girls who heard the bulletin-style talk gained 3.60 points; the girls who heard the informal talk gained 10.40 points; and the girls who heard the interview gained 10.05 points, making the interview type and the informal talk almost three times as effective as the bulletin-style radio talk in teaching subject matter.

<sup>1/</sup> The standard error of the difference in pressing-test scores of the groups over equated control groups was: Bulletin style, 0.42; informal talk, 0.49; interview, 0.71. The critical ratios were: Bulletin style, 8.6; informal talk, 21.2; and interview, 14.2.




Group hearing broadcast	Average score of equivalent control group	Gain in average pressing score over equivalent control group		
		0	5	10
Bulletin style....	11.14	3.60		
Informal talk.....	10.72	10.40		
Interview.....	11.70	10.05		

Figure 2.--Gain in pressing test score of girls hearing three radio broadcasts over an equivalent group that did not hear a broadcast

#### ACTION FOLLOWING THE BROADCASTS

Table 3 presents the relative effectiveness of the three types of broadcasts in stimulating the girls to try the methods suggested.

Table 3.--Action following the three radio broadcasts

Action taken in two weeks following broadcast	Percentage each group reporting action		
	Bulletin style	Informal talk	Interview
Pressed a woolen garment according to directions in broadcast.....	29	48	41
Removed bagginess from skirt, dress, or coat.....	23	21	63
Removed shine from woolen garment..	18	34	47
Sent for bulletins on how to press..	16	45	72
Told someone else how to press woolen garments.....	8	58	41

These data indicate that the informal talk and the interview stimulated the girls to more action than the bulletin style broadcast.

#### TYPE OF PRESENTATION PREFERRED

To measure the girls' interest in each broadcast, they were asked "If a 4-H Club radio program similar to the one you heard on

'pressing woollens' were given each week over WBOW at a time when you were free to listen, would you listen every week?" The answers indicate that the bulletin-style broadcast would not hold an audience of rural girls as well as the other two types tested (figure 3).

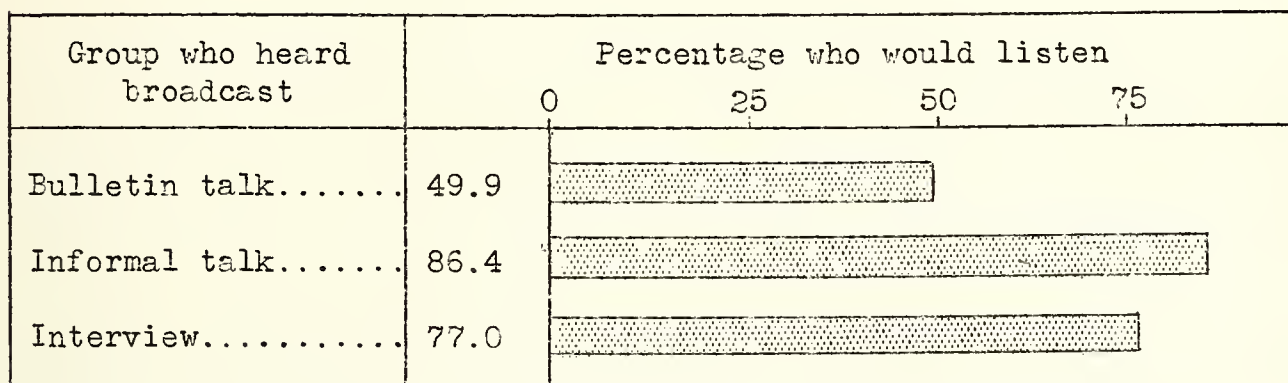


Figure 3.--Percentage of girls who listened to three broadcasts who would listen to similar broadcasts

#### SUMMARY AND CONCLUSIONS

Radio offers possibilities of reaching most of the rural boys and girls who are members of 4-H Clubs. In every State there is some sort of radio program, presented regularly or occasionally. This study, however, indicates that only a small percentage of 4-H members listen to 4-H broadcasts regularly.

The fact that such a large proportion "didn't know" or "forgot" about the broadcast points to better publicity as a valuable means of increasing the audience. The small listening audience also indicates, at least to some extent, that more attention might be given to what club members say they want to hear: More music, more subject matter, and more experiences of other club members. The greater popularity of local 4-H Club broadcasts indicates that they can be more effective than State or national programs. Club members like to hear people they know, particularly other 4-H Club members. They can most conveniently listen to 4-H broadcasts scheduled any evening, on Saturday, or on Sunday.

Young people of 4-H Club age were more interested in informal talk or an interview than they were in a bulletin-style presentation. Furthermore, when all three were supplemented by a bulletin available upon request, the informal talk and the interview were more effective than a detailed subject-matter talk, as measured by increased knowledge of subject matter and application of this knowledge to home activities. This points directly to the value of presenting subject matter in a conversational manner, whether one, two, or more voices are being used.

